

REMARKS

Claims 1 through 47 are in this case and are presented for consideration. By this amendment, Applicant has amended original independent Claim 1 as well as dependent Claims 16-18. Applicant has canceled Claims 2, 4, 6-10, 12-15, 19, and 21-24. Additionally, new independent Claims 25 and 26 have been added as well as new dependent Claims 27-47, which are based on new Claim 26. New dependent Claims 27-47 are similar to the canceled dependent claims.

Claim 24 has been objected to because Claim 24 seeks to further limit the disclosed wireless means introduced in Claim 23, but states dependency back to Claim 22, which does not mention the wireless means along any part of its dependency chain.

This objection is moot as Applicant has canceled Claim 24.

Claims 1, 2, 16, and 20 have been objected to for the usage of the phrase “at least” which renders the claims indefinite as it makes it unclear whether the particulars are claimed or not.

Claim 1 and Claim 16 have been amended. Specifically, the phrase “at least” has been deleted in Claim 1 and Claim 16. Accordingly, Applicant respectfully requests that the Examiner favorably view Claim 1 and Claim 16 as now presented. .

Claim 9 and Claim 10 have been objected to because of minor informalities.

Claim 9 and Claim 10 have been canceled. However, Applicant paid close attention to the Examiner’s remarks when adding the new equivalent dependent claims. Applicant would like to thank the Examiner for the careful review of the application.

Claims 16-18 are objected to for usage of the terms “strand” and “strut” in a manner

that is not consistent with the definition known to one of ordinary skill in the art, thus possibly rendering the claims indefinite.

Claims 16-18 have been amended. Specifically, the terms “strand” and “strut” have been replaced with more suitable terms. Accordingly, Applicant respectfully requests that the Examiner favorably consider Claims 16-18 as now presented.

Claims 1-3, 5-7, 9, 12-13, 16-18, and 20-22 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Hoch (US Patent 5,313,952) in view of Fry (US Patent 4,539,640).

The Hoch reference discloses an electrode belt assembly having a web belt 12 and an electrode pad assembly 14. The electrode pad assembly 14 has an electrode disk pad 16 and a lead probe assembly 18 that connects to the disk pad 16. The web belt 12 comprises an elongated foam material strip 20 sandwiched between an inner cloth backing strip 22 and an outer cloth backing strip 24. Apertures 26 are spaced evenly along the length of the web belt 12. The web belt 12 further comprises an attachment mechanism 28 for attaching the lead end 30 of the web belt 12 to the trailing end 32 of the web belt 12. The disk pad 16 comprises a flat disk 34 having a body member engaging surface 36 and an opposed surface 38. A receptacle 40 protrudes outwardly from the opposed surface 38 of the electrode pad disk 34. The cross section of the receptacle element 40 matches the shape of the apertures 26 of the web belt 12 such that the receptacle element 40 can be received within a selected aperture 26. The lead probe assembly 18 includes a probe 50 receivable within a channel 42 of the disk pad 16, a probe support element 52 that is generally aligned with the lead probe 50, a coupling wire 54 that extends from the lead probe 50, and a circular support ring 56.

It is Applicant's position that the Hoch reference fails to provide electrode feed lines

that extend along the belt structure or are integrated within the belt material as recited in Claim 1. At most, the Hoch disclosure teaches a coupling wire 54 that extends from a lead probe 50 that connects through a support ring 56 to a channel 42 of a disk pad 16. In the present invention, the electrode feed lines are integrated within the belt material as opposed to the Hoch disclosure that merely has a lead probe 50 directly connected to a channel 42 of the disk pad 16. The Hoch reference fails to lead a person of ordinary skill to solve the problem of integrating the electrode feed lines within the belt so that the electrode feed lines can be united at a central point in order to establish one or more connection points to an external feed line. The present invention solves such a problem as it allows at least one feed point where the electrode feed lines are joined and avoids the electrode lines from each electrode extending out of the belt. The electrode feed lines that are integrated within the belt advantageously allow more electrodes to be easily connected to the belt so that there is an improvement in the imaging and monitoring process as opposed to the Hoch reference that requires each disk pad 16 to be individually connected to the lead probe 50 and placed within the apertures 26. As such, these teachings of Hoch suggest a different approach and do not suggest the features or advantages of the invention. The Fry reference fails to suggest or teach any of the limitations of the primary reference Hoch. The Fry reference only discloses a plurality of electrodes 10 that are arranged in five horizontally spaced rows, each containing thirty electrodes, in a belt or girdle 11 which may be strapped around the patient's chest 12. However, Fry fails to suggest or teach electrode feed lines being integrated within the belt material or a feed line that connects to the electrode feed lines at one or more feed points along the belt material. As such, the teachings of Fry suggest a different approach and do not suggest the features of the invention.

Therefore, it is Applicant's position that Claim 1 is allowable as amended. Accordingly, Applicant respectfully requests that the Examiner favorably consider Claim 1 as now presented.

Claim 4 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Hoch in view of Fry, further in view of Epley (US Pub No. 20040097839).

Applicant has canceled Claim 4. However, Applicant maintains that the Hoch reference fails to teach or suggest all of the limitations as recited in Claim 4, which are now found in Claim 33. As previously discussed, the Hoch reference fails to disclose electrode feed lines that are integrated within the belt material. The Hoch reference fails to lead a person of ordinary skill to solve the problem of integrating the electrode feed lines within the belt so that the electrode feed lines can be united at a central point in order to establish one or more connection points to an external feed line. Similarly, the Fry reference only discloses a plurality of electrodes 10 that are arranged in five horizontally spaced rows, each containing thirty electrodes, in a belt or girdle 11 which may be strapped around the patient's chest 12, but fails to disclose electrode feed lines being integrated within the belt material. Furthermore, the Epley reference fails to teach or suggest any of the features disclosed in the primary reference of Hoch or any of the limitations as recited in Claim 1. As such, these teachings of Hoch, Fry, and Epley suggest a different approach and do not suggest the features or advantages of the invention. Accordingly, Applicant requests that the Examiner favorably consider Claim 33 as presented.

Claims 8 and Claims 10-11 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Hoch in view of Fry, further in view of Kristbjarnarson (US Patent 6,461,307).

Applicant has canceled Claim 8 and Claim 10. The limitations of Claim 8 and Claim

10 are now found in new dependent Claim 35 and new dependent Claim 37 respectively. It is Applicant's position that the Hoch reference fails to teach or suggest all of the limitations as recited in Claim 11. As already discussed, the Hoch disclosure merely teaches a coupling wire 54 that extends from a lead probe 50 that connects through a support ring 56 to a channel 42 of a disk pad 16 as opposed to Applicant's invention, which provides electrode feed lines integrated within the belt. Similarly, as previously discussed, the Fry reference only discloses a plurality of electrodes that are arranged in five horizontally spaced rows, each containing thirty electrodes, in a belt or girdle which may be strapped around the patient's chest, but fails to disclose any of the other features found in the primary reference Hoch. Furthermore, the Kristbjarnarson reference fails to teach or suggest any of the features disclosed in the primary reference of Hoch or any of the limitations as recited in Claim 1. As such, these teachings of Hoch, Fry, and Kristbjarnarson suggest a different approach and do not suggest the features or advantages of the invention. Therefore, it is Applicant's position that Claim 11 is allowable as they are based on newly amended Claim 1. Accordingly, Applicant respectfully requests that the Examiner favorably consider the claims as now presented.

Claim 14 and Claim 15 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Hoch in view of Fry, further in view of Atlas (US Patent 6,353,396).

Applicant has canceled Claim 14 and Claim 15. The limitations found in those claims are now found in Claim 41 and Claim 42 respectively. It is Applicant's position that the Hoch reference fails to teach or suggest all of the limitations as recited in Claim 41 and Claim 42. As already discussed, the Hoch disclosure merely teaches a coupling wire 54 that extends from a lead probe 50 that connects through a support ring 56 to a channel 42 of a disk pad 16 and fails

to disclose electrode feed lines that are integrated within the belt. Similarly, as previously discussed, the Fry reference only discloses a plurality of electrodes that are arranged in five horizontally spaced rows, each containing thirty electrodes, in a belt or girdle which may be strapped around the patient's chest, but fails to disclose any of the other features found in the primary reference Hoch. Furthermore, the Atlas reference fails to teach or suggest any of the features disclosed in the primary reference of Hoch or any of the limitations as recited in Claim 1. As such, these teachings of Hoch, Fry, and Atlas suggest a different approach and do not suggest the features or advantages of the invention. Accordingly, Applicant requests that the Examiner favorably consider new dependent Claim 41 and Claim 42.

Claim 19 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Hoch in view of Fry, further in view of Akiva (US Patent 6,205,346).

Applicant has canceled Claim 19. The limitations recited in Claim 19 are now claimed in Claim 43. As already discussed, the Hoch disclosure merely teaches a coupling wire 54 that extends from a lead probe 50 that connects through a support ring 56 to a channel 42 of a disk pad 16 and does not teach electrode feed lines that are integrated within the belt. Similarly, as previously discussed, the Fry reference only discloses a plurality of electrodes that are arranged in five horizontally spaced rows, each containing thirty electrodes, in a belt or girdle which may be strapped around the patient's chest, but fails to disclose any of the other features found in the primary reference Hoch. Furthermore, the Akiva reference fails to teach or suggest any of the features disclosed in the primary reference of Hoch or any of the limitations as recited in Claim 1. As such, these teachings of Hoch, Fry, and Akiva suggest a different approach and do not suggest the features or advantages of the invention. Accordingly, Applicant requests

that the Examiner favorably consider new dependent Claim 43.

Claim 23 and Claim 24 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Hoch in view of Fry, further in view of Asai (US Patent 4,681,118).

Applicant has canceled Claim 23 and Claim 24. The limitations found in Claim 23 and Claim 24 are now found in Claim 46 and Claim 47. As already discussed, the Hoch disclosure merely teaches a coupling wire 54 that extends from a lead probe 50 that connects through a support ring 56 to a channel 42 of a disk pad 16 and does not suggest electrode feed lines that are integrated within the belt. Similarly, as previously discussed, the Fry reference only discloses a plurality of electrodes that are arranged in five horizontally spaced rows, each containing thirty electrodes, in a belt or girdle which may be strapped around the patient's chest, but fails to disclose any of the other features found in the primary reference Hoch. Furthermore, the Asai reference fails to teach or suggest any of the features disclosed in the primary reference of Hoch or any of the limitations as recited in Claim 1. As such, these teachings of Hoch, Fry, and Asai suggest a different approach and do not suggest the features or advantages of the invention. Accordingly, Applicant respectfully requests that the Examiner favorably consider Claim 46 and Claim 47 in view of the discussion above.

Applicant has added new independent Claims 25 and 26. Applicant has also added new dependent Claims 27-47, which are based on Claim 26. It is Applicant's position that independent Claims 25 and 26 are allowable as presented. Claims 25 and 26 provide for a belt that is composed of an elastic material, which advantageously allows the electrode belt to provide around the body circumference of a patient. Due to the elasticity of the belt material, the electrode belt is in constant contact with the test subject's body and allows for the test

subject's respiratory movements. The electrode feed lines integrated within the material of the belt provides the advantage of allowing the electrode feed lines to be united at a central point in order to establish a connection to an external feed line. Advantageously, the length of the electrode feed lines is longer than the length of the elastic material so that the electrode feed lines can be folded within the elastic material to compensate for any stretching that may occur when the belt is wrapped around a test subject's body.

The prior art as a whole fails to direct the person of ordinary skill in the art toward the features of the invention. Further, the invention includes cooperating features which provide particular advantages which are neither taught nor suggested by the prior art. Accordingly, Applicant requests that the Examiner reconsider the rejection and allow the claims as now presented.

Respectfully submitted
for Applicant,



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